

PROJECT NUMBER: 1101
PROJECT TITLE: Entomological Research
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PERIOD COVERED: October, 1988

I. PHYSIOLOGICAL STUDIES OF THE CIGARETTE BEETLE (CB)

A. STUDY OF GLOBAL ECOLOGY

1. Objective: To determine the distribution and abundance of the CB as it relates to the processing of tobacco into cigarettes.
2. Results: Pheromone traps were installed at ULT's Richmond, Virginia and Shelbyville, Kentucky hogshead storage/refurbishing facilities on 9-16-88. Monitoring programs at Cabarrus (8-28-88) and Louisville (9-13-88) were reviewed.¹
3. Plans: Continuation of monitoring the traps.

B. STUDY OF FLAVOR EXTRACT

1. Objective: To determine the attraction of certain flavor extracts to female adult cigarette beetles (CBs).
2. Results: Prune extract as obtained from the supplier was tested for attractiveness to 200 mixed-sex CBs in the olfactometer. With more than a 40% increase of CBs in the target chambers as compared with the controls, prune extract was highly attractive. Raisin extract as obtained from the supplier was studied under the same conditions as the prune extract and proved to be unattractive to CBs.²
3. Plans: Continue to study the rest of the flavors. Sex the CBs and test the females with flavors found to be attractive to mixed sex CBs.

C. STUDY OF STEM BIOASSAYS

1. Objective: To determine the optimum methoprene treatment level and storage time of stems and stem scraps.
2. Results: Cigarette beetle emergence is progressing in baseline bioassays.³
3. Plans: Initiate bioassays in treated stems and scraps.

D. REFERENCES

1. Ryan, L. Memo to D. L. Faustini, September 16, 1988.
2. Minor, M. F. Notebook #8539, p. 65.
3. Lehman, R. M. Notebook #8519, pp. 97 - 100.

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II. SERVICE TO OTHERS

- A. **Objective:** To conduct and provide technical services to areas outside R&D.
- B. **Results:** Insect fragments found in reprocessed strip at the Tobacco Processing Facility (20th St.) were identified.¹ A recommendation on contact (space spray) insecticides was made to Fabriques de Tabac Reunies (Neuchâtel, S.A.) at the Onnens warehouses.²
- C. **References:**
1. Faustini, D. L. Memo to Frank Pajaczkowski. Insect Fragments in Reprocessed Strip. October 12, 1988.
 2. Faustini, D. L. Memo to Dieter Schulthess. Contact Space Spray Insecticides. October 14, 1988.

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